Codename: ULTRA

Mini-project in Programming for Complex Software Systems
MED3, 2019

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A game "Codename: ULTRA" has been developed in P2 and now for the mini-project, a part of it was used for the client side of this mini-project.

Link for GitHub: https://github.com/CatharinaP/MiniProjectPCSS/tree/server

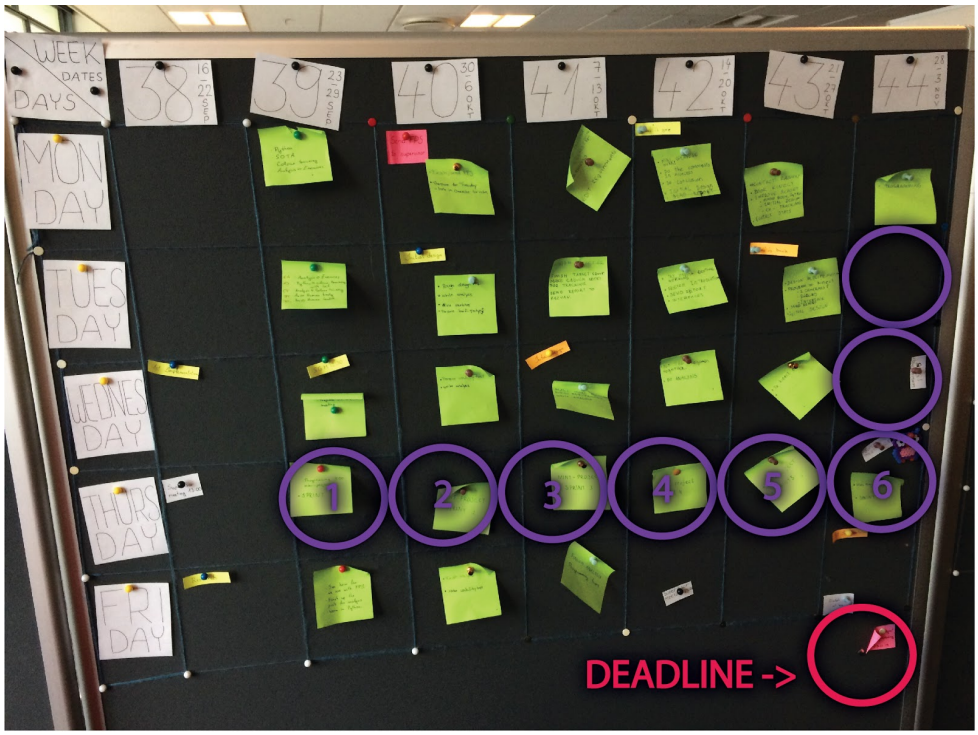
In the above link, the project for group (Catharina Bøgsted Persson, Elizabete Avotiņa, Erik Nagy, Julie Tofte Rasmussen, Mai Jensen, Mikkel Eifoss) can be found. It also includes a README file with instructions on how to set up the program and what are the requirements for it to work.

In the following, an overview of how the workload was divided between the group members, will be discussed. To start with, the process was held with SCRUM principles. In the first day group got together to start the mini-project, milestones were set and decisions made about who will be working on what and how to achieve the best result possible. Initial ideas on how the program should look like at the finished state were introduced and initial UML class diagrams were sketched. Group was split in two parts right after finishing the overall plan for the mini-project. One part worked with the client part and another one worked with server. As parts of code were used from previous P2, 2 group members were delegated for remaking the client part of the actual game. Other 4 group members seeked for knowledge on how to set up a server, read materials provided within the course and went through tutorials, available online. After having the game set up and running, group slightly joined together for discussions on how to succeed with exchanging the necessary information between the server and client. At some point, it became easier to work completely together and all group members chipped in for helping to make the client work. Some minor changes were made also in the server class but biggest part of the time was spent for programming the client class. A help from a TA was used in one of the last group work sessions. While working on the programming, some group members made sure that all the necessary documentation for handing in the project was made.

SCRUM:
Though the process of working on the mini project, we as a group used scrum with weekly sprints. We had a day every week for working together on the mini project. That has been documented in the calendar which have information about both project (Group 302) and mini-project. Beside the weekly planned dates, the last week before we had to hand the mini project we spend more days for group working in mini project.

We have provided a picture of our calendar, which can be seen below this paragraph. It is a physical calendar, and to illustrate our work days we added purple circles to represent the days we spend group wise on the mini project. Purple circles placed on Thursdays contain a number which represent the individual sprints, which is described below the picture. The pink circle is the deadline when the mini-project has to be handed in on the 3rd of November. Initial UML Class diagram and a Use Case

diagram was made a couple weeks before the 1st sprint, as it had to be handed in by the 17th of September. Some reading and preparation was held by each group member individually before actual start of the group work. Having these sprints helped us keeping track of the programming process and be more organized within the group work and work load.



- **Sprint 1**: We wanted to set up Github and defining the theme for the product for mini project. We also divided the group into two teams: 1 team focusing on client and 1 team focusing on the server.

- **Sprint 2**: Finding the materials needed for guiding us in the programming process. We also wished to finish the game in android studio so it would be ready for being modifying for a client class.

- **Sprint 3**: Planned to set up client class in android studio and set up the server class in IntelliJ which is available for running for 1 client.

- **Sprint 4**: Aimed for setting the server up in IntelliJ to be able to run multiple devices.

- **Sprint 5**: Wanted to have multiple devices running on the server in intelliJ

- **Sprint 6**: Finishing the code within android studio (the client) and intelliJ (the server) by having 4 clients running on the server at once. We also aimed to finish writing the required paper for the mini project which would contain scrum method, Use Case, UML diagrams and more.